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Office of Civilian Radioactive Waste Management
U.S. Department of Energy, M/S 025
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Dear Ms. Hanlon:

I am a retired government employee from a career as a hydrologist with the National Park Service. The last three years of my career were spent at Death Valley National Park. There, my major concern was the protection of: (1) Devils Hole pool water levels, and (2) park water resources. The park contains 6 major springs dependent on regional aquifer flow. Also, the Death Valley playa (500 square miles, all below sea level elevation) is a water resources attribute of the park which relies on regional aquifer spring and subsurface flow to sustain its scenic and physical characteristics. The playa is the terminus for regional aquifer flow. The park contains 6 major spring areas dependent on regional aquifer flow. Park animal and plant studies at these springs indicate that as many as 58 species have limited distributions or are listed as endangered/threatened. The protection of these resources prompted concern regarding the long-term status of the regional aquifer. Future development of ground water resources within Amargosa Valley and to the north, north east were seen as the greatest threat to park water resources, be it alluvial aquifer withdrawal or direct withdrawal from the carbonate aquifer below.

Regarding the Yucca Mountain Nuclear Repository, I feel that the water resources required for construction is relatively minor, and limited in time to the period of construction. Thus from this viewpoint I am pleased. I have reviewed selected portions of materials presented by DOE, and have toured the site both as a professional with United States Geological Survey (USGS) personnel and as a public visitor on a general tour.

I have confidence that the engineers and chemists who have worked on this project have done a fine job. Also, the geology and hydrology studies have been

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intense and it has been stated that Yucca Mountain may be the best characterized site in the world. Basic site attributes as have been stated are: (1) the repository is above the ground water table and in an arid climate, (2) the site is remote from populations, and (3) if by any means the material was released to the ground water (regional aquifer), the final destination of the material would be the Death Valley Playa. I see these as being very strong attributes for placement of our national repository of high level nuclear waste.

However, I feel that the geologic and hydrologic characterization of Amargosa Valley is nil. As I understand, DOE has provided funds to Nye County and USGS for such studies. This has been a very good thing and I believe that valuable information has been gained, but that information is very limited. I wish to strongly urge DOE to continue to provide funding for the characterization of Amargosa Valley to: (1) scientifically define the ground water divide between Amargosa Valley and Pahrump Valley - the location should be expected to change with time as population growth and ground water usage in both valleys occurs, and (2) characterize the entire Amargosa Valley hydrology and geology - including the placement of several observation wells in the alluvial aquifer and the carbonate aquifer to be monitored in perpetuity. A ground water model of acceptable validity can then be developed and modified over time using the new observation well data. This project will require years of funding. Benefits seen by this proposal include: (1) if for any reason nuclear material is ever released from the repository, a knowledge of the route and rate at which contaminants would move could very quickly be determined by DOE, (2) the on-going model data and analysis would serve both state and county officials in various aspects of planning/decisions, and (3) these data would greatly assist various Federal Agencies who administer land within the area. Future understanding and coordination by these three entities will be necessary for the well-being of future generations.

I appreciate the opportunity to comment on this very important project.

William Werrell